Diese Website verwendet Cookies von Google, um Dienste anzubieten und den Traffic zu analysieren. Deine IP-Adresse und dein User-Agent werden zusammen mit Messwerten zur Leistung und Sicherheit für Google freigegeben. So können Nutzungsstatistiken generiert, Missbrauchsfälle erkannt und behoben und die Qualität des Dienstes gewährleistet werden.

WEITERE INFORMATIONEN OK

Monday, July 23, 2012

Pascal's scams (ii)

Besides the robot apocalypse, there are many other, and often more important, examples of Pascal scams. The following may be or may have been such poorly evidenced but widely feared or hoped-for extreme consequences (these days the fears seem to predominate):

1. That we are currently headed for another financial industry disaster even worse than 2008 (overwrought expectations often take the form of "much like the surprise we most recently experienced, only even more extreme").

2. That global warming has caused or will cause disaster X (droughts, floods, hurricanes, tornadoes, ...)

3. A whole witch's brew of "much like what just happened" fears were the many terrorist disaster fears that sprouted like the plague in the years after 9/11: suitcase nukes, the "ticking-time bomb" excuse for legalizing torture, envelopes filled with mysterious white powders, and on and on.

4. On the positive daydream side, Eric Drexler's "molecular nanotechnology" predictions of the 1980s: self-replicating robots, assemblers that could make almost anything, etc. -- a whole new industrial revolution that would make everything cheap. (Instead, it was outsourcing and a high-tech version of t-shirt printing that made many things cheap, and "nanotechnology" became just a cool buzzword to use when talking about chemistry).

5. A big hope of some naive young engineers during the previous high oil price era of the late 1970s: solar power satellites made from lunar materials, with O'Neill space colonies to house the workers. Indeed, a whole slew of astronaut voyages and industries in space were supposed to follow after the spectacular (and spectacularly expensive) Apollo moon landings -- a "much like recently experienced, only more so" daydream.

6. The "Internet commerce will replace bricks-and-mortar and make all the money those companies were making" ideas that drove the Internet bubble in the late 1990s. Indeed, most or all of the bubbles and depressions in financial markets may be caused by optimistic and pessimistic Pascal fads respectively.

History is replete with many, many more such manias and scares, whether among small groups of otherwise smart people, or

Pages

- Home

About Me

Nick Szabo

"A premier thinker about history, law and economics, and the lessons they have for security." -- Adam Shostack, Emergent Chaos

"Szabo comes out with these essays that leave me in awe." -- Brian Dunbar

"Reading material that is eclectic, challenging and endlessly fascinating." -- Sean McGrath, Propylon

"Like most blogs worth my attention, this blog is updated only infrequently. That is because the authors of blogs worth my attention only post when they have something to say that is true, relevant and not already known by their audience. Most of the human race does not have the skill to know when an idea has these three properties. The skill is particularly rare in the fields of politics and economics, which is why this blog is such a rare and valuable thing." -- Richard Hollerith

View my complete profile

among the vast majority of a society. Sometimes poorly evidenced consequences do happen to occur, just in way(s) very different from expected -- for example Columbus, following the advice of well respected authorities like Strabo and Toscanelli and heading west for India -- ending up instead in America. And sometimes a lucky penny prophecy of a wonderful or terrible but very unlikely event comes true -- although hardly any of us ever seem to learn about these sage predictions until after the event. Then they only make us believe enough in prophecy that we fall for the next scam.

Posted by Nick Szabo at 2:26 AM

11 comments:

gwern said...

#1: seriously? The worst American depression since the Great Depression, even after TARP and AIG bailouts and all of that, and the possibility of an even worse crack up at some point is not just low probability (which I would certainly agree with - most of America's history was not spent wallowing in the Great Depression, after all), but *so* low that fearing is falling prey to a Pascal's *scam*?

#2: I'm not sure what you mean here. That it's statistical innumeracy to trace any particular natural disaster back to a slow global trend like global warming, or is this a denial that global warming can have any effect on the frequency or magnitude of natural disasters?

#6: Yes, because offline retailers haven't been slowly crushed under the Internet as dot-com darlings like Amazon continue to go from strength to strength? I'll think about how this was a 'Pascal's scam' the next time I pass an empty Borders.

The only common trait these entries seem to have is 'Nick Szabo thinks they are stupid'.

9:24 AM

nick said...

Methinks more careful reading may be in order. These _may be_ Pascal scams: I am asking whether they are or not. I am asking whether there actually is or was good evidence for them beyond arguments from authority, which tend to be the most common arguments used to convince people that Pascal scams are true. (e.g. "Hanson and Yudkowsky say there's an X% probability").

#1. Yes, seriously. Thinking the last suprise is going to repeat itself is a common fallacy. I am asking whether any of the authorities who predict this actually have good evidence of it, evidence substantially stronger than that of the rebuttal arguments. I'm asking whether slumping prices in some markets are based on better evidence than mere pessimsim and fears stemming from the last surprise.

#2. Again, I am asking whether the authorities who predict such things actually have good evidence for it.

#6 There is no corresponding set of Internet companies that have made all or even most of the bookstore's revenue from taking the business that the bookstores have lost largely to free content on this Internet. Again it helps to actually read what I said.

What these have in common are beliefs about extreme conseqences _for wich I have not heard_ any good underlying evidence, only arguments from authority and the implied suggestion (sometimes even stated outright) that I should care because the consequences

Blog Archive

- ► 2018 (1)
- ► 2017 (3)
- ► 2016 (4)
- ► 2015 (3)
- ► 2014 (3)
- ► 2013 (3)
- ▼ 2012 (8)
  - ► October (2)
  - ► August (2)
  - ▼ July (4)
    - Three philosophical essays
    - Pascal's scams (ii)
    - Pascal's scams
    - More short takes
- ► 2011 (12)
- ► 2010 (9)
- ► 2009 (29)
- ► 2008 (55)
- ► 2007 (47)
- ► 2006 (130)
- ► 2005 (44)

would be so wonderful or so dire. I could of course be wrong if in fact if the underlying evidence is substantially stronger than the rebuttal evidence. But the general history of predictions of extreme consequences, outside the hard sciences, is that they usually gather the support of both authorities and those who believe authorities without in fact having good underlying evidence. And the big events that actually occur are generally the ones that the well-known authorities and their followsers were not predicting -- only the lucky penny prophet who you never hear of until after the event.

11:58 AM

Dmytry said...

The global warming issue is more of a battle where much anything goes.

For extreme example, suppose that we could suddenly raise fine structure constant by somewhere between 0.1% and 1% . Clearly that's most likely a very bad idea and the notion of continued survival after such a change is a privileged hypothesis. But if I am to try to explain this to a layman, I will have to provide examples of what may happen: such and such reactions may get faster and Earth would blow up etc etc.

The global warming is similar - you can expect negative consequences for pretty solid reasons. The problem is that it is a public policy issue and if the public sees two people one giving exact prediction (nothing is going to change) while other says, well, we can't be specific but blah blah blah, the latter is very unfairly discounted for some reason.

1:53 AM

nick said...

Dmytry, I'm not sure I can agree that the above listed alleged negative consquences of global warming (floods, droughts, hurricanes, and tornadoes) are being "very unfairly" dicounted, or that they are being discounted for the reason you cite. The public needs far more to go on than arguments from authority, because (as much of the list above suggests, and many more examples I could give besides) authorities are usually wrong about extreme consequences. The more extreme the alleged consequences, the more likely that authorities will exagerate them, due to the biases I discussed in the first part of "Pascal's scams". To which I'd add another bias -- greater alleged consequences gain more attention and are thus selectively chosen for media coverage, and thereby also gain funding for the authorities who claim to combat such threats. So media and other authorities have strong incentives to bend reality to motivate their own funding.

And in the case of the most extreme alleged consequences, which often privilege one extreme possibility over a very large space of more benign or even opposite utility possibilities, this bending can twist the truth beyond all semblance to what is actually probable, and such forgery or delusion cannot be readily detected and is often readily beleived. Giving the rest of us who recognize this phenomenon all the more reason to discount "the sky is falling!" predictions.

So the sad reality is that outside the hard sciences, which give rise to very high accuracy and indendently repeatable experiments that bear quite directly on the causal mechanism in question, and with some other exceptions that aren't relevant to global warming, authorities aren't a good source of truth about extreme consequences.

So the public has a right to put alleged "negative consequences for pretty solid reasons", which don't seem to us layfolk very solid at all, unless we blindly trust authority on such matters, through the Pascal scam wringer:

(1) How good is the evidence for each chain the the causal connection from CO2 to the alleged set of future fires, tornadoes, floods, and/or hurricanes?

(2) Are _all_ the significantly possible consequences being properly taken into account, or are only certain extreme consequences being dwelt on to the negligence of other major consequences of opposite utility?

(3) If the evidence is not so solid, what experiments can we do to make it solid, before we are forced to spend billions (or in the case

of global warming, trillions!) on alleged solutions to the alleged problem? In other words, is the "other person" in your scenario giving a *proximitely testable* prediction -- i.e. a prediction where the prediction of more distant severe harm can be soundly falsified or verified, by sound empirical observation and sound induction to a simple set of general rules, before the expenditures to prevent or mitigate those alleged distant harms need to be undertaken?

You can convince me if you can successfully put such a theory through the Pascal scam wringer, and I suspect it would help you convince much of the rest of the public as well.

3:16 PM

Dmytry said...

It is not going to be possible for layperson to run any sort of simulation of the effects of the warming. Furthermore, there has been quite significant media bias against the warming in the country most contributing to the warming, where I guess you live.

On the chain to the extreme consequences, go back to trying to guess effects of modification of fine structure constant, as a rather extreme example where your line of reasoning fails too. It is reasonable to say that changing the fine structure constant will probably blow up the Earth or the Sun, but no exact simulation of whats actually going to happen has been done, the set of consequences evaluated has been small, and so on.

You got yourself a fully general counter argument to anything uncomfortably big - not just to charlatan/crackpot Yudkowsky, but also to any prediction of any global consequences that you can realistically expect to have to spend some money on, even on a scale as obvious as 'lets raise fine structure constant'.

1:04 AM

nick said...

You got yourself a fully general counter argument to anything uncomfortably big

No. The asteroid threat as I discussed is probably _not_ a Pascal scam -- because the probability is well-defined by very accurate and simple laws and measurable deviations from same. Whence accurate expected value calcuations for such threats, and we can do fairly straightforward observations to improve their accuracy. Similarly, lotteries with well-defined odds and payouts are not Pascal scams. These are two examples that have satisfied the burden of presenting the evidence for the odds and consequences they allege. They have successfully rebutted the presumption against alleged extreme consequences.

The fine structure constant may well also fall into this good-evidence category, if we can e.g. accurately trace the consequences of randomly changing the constant to e.g. inability to form complex molecules via simple laws that have been very well verified empirically. (Of course, there's no good evidence that one can actually change the fine structure constant, so it's just an academic hypothetical, but I'm willing to consider it as an if-you-could-then-what thought experiment).

Unfortunately, these neat and simple examples aren't typical. Most or perhaps even the vast majority of alleged extreme consequences that many people consider important are based on a far poorer quality of evidence.

Indeed, my argument is far more about quality of evidence than it is about extreme consequences or long odds. It's just that long odds usually (but not always) tend to reflect poor evidence, and allegations of extreme consequences tend to focus people's attention on fears or hopes of such consequences and thereby bias them against demanding evidence or exploring evidence for other consequences. The result being that expected value calculations (including the ones our brains tend to do implicitly to judge the importance of an issue) usually work very poorly in these situations. We should therefore put a strong burden of presenting accurate (not merely precise) evidence on people alleging extreme consequences. Our rebuttable presumption should be that any particularly alleged extreme consequences won't occur.

...there has been quite significant media bias against the warming in the country most contributing to the warming

Quite the contrary, media in almost any country generally has strong incentives to gain attention. To gain attention, they often talk authoritatively about extreme consequences while presenting little or no evidence, except for arguments from authority. We are supposed to believe it based on their authority. I am calling bullshit.

4:39 PM

Dmytry said...

See, the issue is that the warming is complicated. One thing for sure, we are quite significantly changing a parameter of a system that we have adapted to, leading up to multitude of very hard to trace consequences (the only thing we can say is that weather patterns will change).

One should reasonably expect lower degree of adaptation to the new state, in so much as we did adapt to the previous state, given that the change is by no means tiny when it comes to influencing the weather.

I do agree that blaming specific hurricanes on global warming is rather silly. But at the same time, the loss of glaciers is certain, the increase in sea level is certain, and the more severe weather in some regions that previously did not get severe weather, is quite likely, as the patterns of where severe weather happens and where it does not, will change. Given our adaptation to existing pattern, such changes are negative.

What you demand is a very specific type of estimation of the effects. The one that can not be readily computed for the warming. In the extreme, it is as if you demanded a weather forecast form June 10, 2050 , to show the warming, or two forecasts and the difference .

9:44 PM

Dmytry said...

Also, there's nothing wrong with argument from authority when the authority is scientific consensus and you can't readily out-expert it. The argument from fake authority, and especially the arguments based on good sounding but fallacious syllogisms, built upon faux-'general' framework, that's what's bad.

That being said, I do concede that within the climate science you can find same cranks and unscrupulous money seekers as in the futurology, and these folks make the most extraordinary of claims, both on the exaggeration side, and on the 'greenhouse effect is false' side, which are then repeated by the media in the tailored-to-customer ways (to liberals and conservatives respectively).

10:09 PM

nick said...

One should reasonably expect lower degree of adaptation to the new state

This is a rather generic and abstract argument. If you want to make it in this area you should make it for other kinds of changes to complex systems as well. In particular you should make it for many of the social changes we're going or have gone through, many of which have a greater impact on human life than redistribution of the weather patterns, and where technology is less useful for adaptation. (What technologies mitigate high divorce rates, high rates of children raised without fathers, and so on? Much easier to adapt to changing rain patterns by e.g. irrigation or changing what crops grow where).

Since I tend to agree with arguments about the costs of adapting to change, I've come out in support of developing institutions like cap & trade that we could use in the future to slow and eventually reduce CO_2 emissions. Being new institutions, they need a long process of trial and error before they will be ready to start gently nudging our economies towards less CO_2 output.

However, looking on it as an economic problem, the bulk of the solution will probably have to be adaptation, not draconian economic changes. Just looking at the impact on agriculture, for example, a draconian cut in fossil fuel use would be far more devastating to world food supplies than the need to adapt to some redistributed weather patterns via crop changes, irrigation, etc. Keep in mind that besides exporting CO2, great fuel consuming countries like the U.S. and Canada also export food.

4:55 PM

nick said...

I also observe that global warming alarmists typically neglect a very solidly evidenced positive benefit of CO2: that greater CO2 concentrations increase plant growth. That's a great benefit to agriculture, forestry, and other necessities and enjoyments we get from plant life. It is alas typical of a Pascal scam to ignore consequences of the opposite utility.

Also, there's nothing wrong with argument from authority when the authority is scientific consensus

Here we greatly differ. There are some hard sciences, mainly well-verified parts of physics and chemistry, and some of biology, where authority can be respected in this manner. There are others of greater complexity and less predictive power where it should not (e.g. nutritionists who have often made poorly evidenced consensus recommendations where much later the consensus changes)

In a study as complex and with so little track record of successful prediction as climatology, I'm afraid much of it is closer to the speculations of nutritionists than to, for example, the hard science of DNA sequencing. DNA being a fairly simple structure (interpreting what complex system or behavior(s) the DNA codes for is often quite another matter...)

What is at work here is related to what Richard Feynman called "cargo cult science": basking in the authoritative glow of the successful simple hard sciences like physics, and inappropriate conceding of such authority by many in the public. Most of reality is too complex for science to be nearly as successful as they have been at tackling physics. The respect and authority we grant to scientists studying simple (low Kolmogorov complexity) phenomena should not be extended to scientists studying more complex areas and having poor track records of successful prediction.

5:28 PM

Dmytry said...

Well, it would seem that as such increase in plant yield is unlikely to result in significant advantage to us.

With regards to change in the patterns, we got poor people on equator, for one thing - while it may well be the case that it would be more beneficial to keep burning coal and somehow compensate those people, I am not expecting this to happen.

Furthermore, economics is massively inefficient, and planning too short sighted; taxing the emissions right now has the positive externalities of supporting development of more sustainable energy technologies earlier - and especially when it comes to oil, infrastructure preparedness for the decreasing availability (i.e. public transportation, smaller cars, etc); it may be better than obtaining same money via different types of taxation.

4:03 AM

Post a Comment

Simple theme. Powered by Blogger.